

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim 1 is the only claim remaining.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Dowson (U. S. Pat. No. 384,514) in view of Trosch (U. S. Pat. No. 4,215,717) or Reeve (U. S. Pat. No. 1,013,093).

The patent to Dowson discloses a "check valve, comprising: a valve casing (upper 17 and lower 18 valve housings), the valve casing being formed with an inlet (in lower housing 18), a valve chest (at the immediate inlet of housing 17) having a diameter larger than that of the inlet, and an outlet (the reduced diameter downstream section of housing 17); an annular valve seat (19) formed between the inlet and the valve chest; a valve element (20) disposed within the valve chest to open and close the annular valve seat (19), wherein a recess (in figure 3 for example, a "recess" is illustrated in the inlet side of the valve head 20 to accommodate the metallic ring 44 when the valve is closed) is formed in the valve element on the inlet side; a valve stem (lower 34) projectingly provided on an inlet side of the valve element (20); a guide member (annular ring at the center of cross bar 36) with which an outer periphery of the valve stem (34) is in sliding contact, the guide member (annular ring at the center of cross bar 36) provided at inner ends of ribs (36) that project into the valve chest from an inner wall of the inlet (note ring 44 sits proud of seat 19, which ring 44 extends "into the

valve chest”), the recess (unreferenced but clearly shown in fig. 2 receiving the upper edge of ring 44) in the valve element (20) being formed to receive therein the ribs (i.e. the upper ends of cross bars 36) projecting to the valve chest and also to receive the guide member (annular ring); an outlet-side of the valve stem (34) projectingly provided on the outlet-side of the valve element (20); and an outlet side guide member (at 35) with which an outer periphery of the outlet-side guide stem (34) is in sliding contact” as recited.

Thus the patent to Dowson discloses all the claimed features with the exception of having “the length of the valve stem (be) about equal to the distance between the valve inlet and the valve outlet in the valve casing; and the outlet-side of the valve stem projects out of the valve casing when said check valve is in the fully open position”

Firstly, the patent to Trosch discloses, in figures 4 and 5 for example, that it is known in the art to employ a reciprocating valve stem at 10, 26, 27, wherein the inlet side and the outlet side have respective guiding support rings 46, 49, the stem length being “about equal to the distance between the valve inlet (at the left side of figs. 4 and 5) and the valve outlet (at the right side of figs. 4 and 5) of a valve casing (housing 41) and the outlet side of the valve stem (at 27) projects out of the valve casing (41) when the valve is in the fully open position (see fig. 4) for the purpose of assuring that the valve stem is guided by the support rings at all positions of the valve stem and to allow the outlet side valve stem extend beyond the housing.

Secondly, the patent to Reeve discloses, in figure 1 for example, that it is known in the art to employ a reciprocating valve stem at 12, wherein the inlet side (at 4) and the outlet side (at 3) have respective guiding support rings 16, 15, the stem length being “about equal to the distance between the valve inlet (at inlet flange 4) and the valve outlet (at the upper end of outlet side casing 8) of a valve casing (housing 1 and 8) and

the outlet side of the valve stem (at the upper portion within guide ring 15) projects out of the valve casing when the valve is in the fully open position (although not illustrated it is reasonably inherent that the maximum stroke of the valve from the illustrated closed position to the maximum open position, when the stop 17 abuts the lower edge of upper ring 15, will allow the upper valve stem to extend beyond the upper outlet side of the upper valve housing 8) for the purpose of assuring that the valve stem is guided by the support rings at all positions of the valve stem and to allow the outlet side valve stem extend beyond the housing.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Dowson a valve stem of a length "about equal" to the length of the valve housing and to allow the upper portion of the valve stem to extend beyond the valve casing outlet for the purpose of assuring that the valve stem is guided by the support rings at all positions of the valve stem and to allow the outlet side valve stem extend beyond the housing as recognized by either one of Trosch or Reeve.

Regarding applicants remarks as they may apply to the above, the patents to Trosch and Reeve both demonstrate known valve configurations in which the overall length of the valve stem is "about equal" to the overall length of the valve casing which allows for the outlet portion of the respective valve stem to extend beyond the valve casing outlet.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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